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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,402

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Steven J. McCarthy

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EXAMINER

NGUYEN, MINH CHAU

ART UNIT

PAPER NUMBER

2145

NOTIFICATION DATE

DELIVERY MODE

04/30/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

creganoa@addmg.com

Office Action Summary	Application No. 10/779,402	Applicant(s) MCCARTHY ET AL.	
	Examiner MINH-CHAU NGUYEN	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/10/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to the amendment of the applicant filed on 01/23/08.

Claims 1-21 are presented for further examination.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 01/10/08 is being considered by the Examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-7, 9-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Albert et al. (Albert) (US 6,970,913B1).

2. Claim 1, Albert teaches a communications system comprising:

a plurality of servers (i.e. servers 1-3) connected together in a network (i.e. network 210) for processing a plurality of different job types (i.e. processing incoming and outgoing packets or handling different connections) having

respective different resource usage characteristics (i.e. usage of processing capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col. 30, L. 14-31; and Col. 31, L. 53-59);

each server determining a respective health metric thereof based upon at least one job being processed (i.e. determining a usage of processing capacity for each of the virtual machine that is being implemented) thereby and weighting the health metric (i.e. weighting the usage of processing capacity) based upon the respective resource usage characteristic of the at least one job (i.e. at least one virtual machine) (figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-59; and Col. 32, L. 49-51); and

a dispatcher (i.e. service manager 1140 in figure 11A) for collecting the weighted health metrics (i.e. level of load as a weight factor which is a number of connections being serviced by each server) (i.e. weights) from said servers (i.e. servers 1-4) and distributing jobs to said servers based thereon (figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and Col. 31, L. 53-Col. 32, L. 51).

3. Claim 2, Albert teaches wherein the resource usage characteristics comprise at least one processing utilization characteristic and at least one input/output utilization characteristic (Col. 6, L. 51-55; and Col. 30, L. 14-31).

4. Claim 3, Albert teaches further comprising a knowledge base for cooperating with said dispatcher (i.e. service manager) for storing the weighted health metrics (i.e. weights) (Col. 31, L. 49-59).
5. Claim 4, Albert teaches wherein said servers map the weighted health metrics (i.e. weights) for different resource usage characteristics to a common scale (i.e. a common level) (Col. 3, L. 51-58; and Col. 30, L. 1-31, L. 61-Col. 31, L. 3).
6. Claim 5, Albert teaches wherein said servers provide completed job results to said dispatcher (i.e. service manager), and wherein the weighted health metrics are provided to said dispatcher with the completed job results (i.e. “the feedback messages from the real machines is that the messages somehow express the level of load on the real machine as a result of handling connections”, and “a process executed on a server for determining a weight to be sent to the service manager in a feedback message...Next, in a step 1206, the server determines the remaining processing capacity”. From these quotation notes, it does teach the weights are sent to the service manger with the completed job/process results) (Col. 30, L. 1-31).

7. Claim 6, Albert teaches further comprising at least one load generator (i.e. load balance engine/algorithm) for generating the jobs for said servers and communicating the jobs to said dispatcher; and wherein said dispatcher further provides the completed job results to said at least one load generator (Col. 3, L. 59-Col. 4, L. 3; and Col. 8, L. 57-67; and Col. 9, L. 16-22; and Col. 11, L. 56-65; and Col. 12, L. 46-49; and Col. 30, L. 1-31).
8. Claim 7, Albert teaches wherein said dispatcher periodically polls said servers for the weighted health metrics (Col. 30, L. 43-52).
9. Claim 9, Albert teaches a load distributor for a plurality of servers (i.e. servers 1-3) connected together in a network (i.e. network 210) for processing a plurality of different job types (i.e. process incoming and outgoing packets) having respective different resource usage characteristics (i.e. usage of processing capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col. 30, L. 14-31; and Col. 31, L. 53-59), and each server determining a respective health metric (i.e. level of load as a weight factor which is a number of connections being serviced by each server) thereof based upon at least one job being processed thereby and weighting the health metric (i.e. weight) based upon the respective resource usage characteristic of the at least one job (i.e.

usage of processing capacity) (figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-59; and Col. 32, L. 49-51), the load distributor comprising:

a dispatcher (i.e. service manager 1140 in figure 11A) for collecting the weighted health metrics (i.e. weights) from the servers (i.e. servers 1-4) and distributing jobs to the servers based thereon (figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and Col. 31, L. 53-Col. 32, L. 19); and

a knowledge base for cooperating with said dispatcher (i.e. service manager) for storing the weighted health metrics (i.e. weights) (Col. 31, L. 49-59).

10. Claim 14, Albert teaches a job distribution method for a plurality of servers (i.e. servers 1-3) connected together in a network (i.e. network 210), the servers for processing a plurality of different job types (i.e. process incoming and outgoing packets) having respective different resource usage characteristics (i.e. usage of processing capacity) associated therewith (Col. 6, L. 51-55; and Col. 13, L. 60-65; and Col. 30, L. 14-31; and Col. 31, L. 53-59), the method comprising:

determining a respective health metric of each server (i.e. determining level of load as a weight factor which is a number of connections being serviced by each server) based upon at least one job being processed thereby and weighting the health metric (i.e. weight) based upon the respective resource

usage characteristic of the at least one job (i.e. usage of processing capacity)
(figure 14; and Col. 30, L. 1-31; and Col. 31, L. 53-59; and Col. 32, L. 49-51); and

distributing jobs to the servers based upon the weighted health metrics
(figure 14; and Col. 3, L. 59-Col. 4, L. 3; and Col. 30, L. 1-49; and Col. 31, L. 53-
Col. 32, L. 19).

11. Claim 16, Albert teaches further comprising mapping the weighted health metrics
(i.e. weights) for different resource usage characteristics to a common scale (i.e.
a common level) (Col. 3, L. 51-58; and Col. 30, L. 1-31, L. 61-Col. 31, L. 3); and
wherein distributing jobs to the servers comprises distributing the jobs based
upon the commonly scaled weighted health metrics (figure 14; and Col. 3, L. 51-
Col. 4, L. 3; and Col. 30, L. 1-49, L. 61-Col. 31, L. 3, L. 53-Col. 32, L. 19).

12. Claims 10-13 are corresponding apparatus claims of system claims 2,4,5,7.

Therefore, they are rejected under the same rationale.

13. Claim 15 is corresponding method claim of system claim 2. Therefore, it is
rejected under the same rationale.

14. Claims 17-21 are corresponding computer-readable medium claims of apparatus
claims 9-13. Therefore, they are rejected under the same rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albert as applied to claim 1 above, and further in view of Ross et al. (Ross) (US 6,263,212B1).

16. Claim 8, Albert teaches the jobs relate to IP packet processing (Col. 6, L. 51-63; and Col. 7, L. 31-39).

Albert fails to teach the jobs relate to electronic mail (e-mail) processing. However, Ross, in the same field of endeavor having closely related objectivity, teaches the jobs relate to electronic mail (e-mail) processing (Col. 6, L. 1-10).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated Ross's teachings of the jobs relate to electronic mail (e-mail) processing, in the teachings of Albert in load balancing using distributed forwarding agents with application based feedback for different virtual machines, for provide an advantage for generating load balancing for email processing.

Response to Arguments

Applicant's arguments filed 01/23/08 have been fully considered but they are not persuasive.

(A) Albert et al. fails to recite each server determining a respective health metric thereof based upon at least on job being processed thereby and weighting the health metric based upon the respective resource usage characteristic of the at least one job.

As to point (A), in response to applicant's argument, Albert does teach in column 30 recites: "each server determines a weight for each virtual machine implemented by the real machine and also for each port of the server that implements part of a virtual machine. The weights express a capacity of the port to process packets for a given virtual machine" (line 61-65), and "in a step 1204, the server determines the usage of processing capacity for each of the virtual machines that is being implemented" (line 21-23). According to these paragraphs, Albert does disclose each server includes plurality virtual machines. Each server does determine a weight, same as a usage of processing capacity, based upon at least one virtual machine being implemented (i.e. it is equivalent to at least one job being processed). Moreover, each server also weights the weight or the usage of processing capacity of the at least one virtual machine to get a level of load on each server. Finally, a result from the weighting process would give out a weighted factor of each server.

Therefore, Albert et al. does disclose each server determining a respective health metric thereof based upon at least on job being processed thereby and weighting the health metric based upon the respective resource usage characteristic of the at least one job.

(B) Albert et al. fails to disclose a dispatcher for collecting the weighted health metrics from the server and distributing jobs to the servers based thereon.

As to point (B), in response to applicant's argument, Albert does teach in Col. 30, line 43-47: "If all of the weights are sent to one server before being sent to the service manager, then the representative server can normalize the different weights from the different servers so that the weights express the relative capacity of each server to process packets for different virtual machines", and in Col. 31, line 53-59: "a data structure 1400 for a first virtual machine port and protocol that includes all of the servers used to implement that virtual machine port and protocol along with a weight for each server". According to these paragraphs, Albert does disclose the service manager (i.e. dispatcher) collects plurality weights from plurality servers and the service manager saves them into its database 1400.

In addition, Alberts does disclose in Col. 32: "the service manager receives feedback packets from each server that include weights for the server that control the selection of that sever for handling connections to a virtual machine implemented on the server" (line 14-17), and "a process for assigning a

server to handle a new flow or connection" (line 23-24), and "the real machine (i.e. a server) is selected by the service manager using the weights retrieved from its database for the virtual machine...a real machine is chosen to handle the connection using a weighted probability method" (line 38-41). Thus, from these paragraphs, Alberts does disclose the service manager distributes job (i.e. assign/allocate a server to handle connection) based upon retrieved servers' weights.

Therefore, Albert et al. does disclose a dispatcher for collecting the weighted health metrics from the server and distributing jobs to the servers based thereon.

Conclusion

Applicant's amendment necessitated the rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing

date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-CHAU NGUYEN whose telephone number is (571) 272-4242. The examiner can normally be reached on 7AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JASON CARDONE can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. N./
Examiner Minh-Chau Nguyen, Art Unit 2145

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2145

<div>Application Number</div> <div></div>	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/779,402	MCCARTHY ET AL.	
	Examiner	Art Unit	
	MINH-CHAU NGUYEN	2145	